

the Environmental Protection Agency "said it was a good idea to study the issue more and they warned that extended use of portable cellular phones might not be a good idea."³² A FDA consumer advisory released February 4, 1993, stated that insufficient research exists to rule out the possibility of a health risk and suggested limiting the duration of mobile telephone use to reduce possible risk.³³

These health concerns about cellular already have spilled over into the PCS industry. The House Subcommittee on Telecommunications and Finance has initiated an inquiry into the health risks of cellular and PCS devices and requested a report by the General Accounting Office.³⁴ Indeed, the health effects of PCS and cellular may be similar given proposals to permit PCS operation at power limits similar to cellular power limits.³⁵ Moreover, according to information the Commission's Office of Engineering and Technology submitted to the Subcommittee, PCS may pose especially significant problems because of the extensive use of digital technology:

³² "Cram Course in Crisis Management, The Cellular Industry Struggles to Contain a Health Scare," Wash. Post, Feb. 9, 1993, at D1, col. 2.

³³ "Update on Cellular Phones," FDA Talk Paper (February 4, 1993).

³⁴ Briefing on Health Effects of Radiofrequency Radiation Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce (February 2, 1993) (letter dated January 27, 1993, from Chairman Markey to Comptroller General).

³⁵ See PCS Notice at paras. 114-116.

A factor that might be the subject of future investigations is the rapid development of digital technology in the use of mobile communications. Within the next several years most cellular radio communications will begin using a digital mode of transmission. Some concern has been expressed that a pulse-modulated waveform may be more biologically interactive than continuous wave transmissions, although this is not proven.³⁶

Even if studies conclude that PCS devices pose no health hazards, this scare shows how one day's news can threaten the viability of an entire industry. PCS entities should not rush to involuntarily relocate microwave incumbents until these concerns are resolved.

2. PCS Licensing Through Competitive Bidding Will Increase Costs.

If the Commission awards PCS licenses through competitive bidding, PCS entities will face additional costs that may affect their ability to finance involuntary relocation of microwave incumbents. In the PCS docket, the Commission supports use of competitive bidding, subject to Congress granting it statutory authority to use that procedure to award licenses. Such authority may be granted this Congress with enactment of the "Emerging Telecommunications Technologies Act."³⁷ The Senate bill would authorize spectrum auctions on an experimental basis and contemplates permanent auction authority beginning in 1997. The Senate auction provision signals a significant shift in favor

³⁶ "Information on Cellular Radio and Radiofrequency Radiation," FCC Office of Engineering and Technology Spectrum Engineering Division, at 5.

³⁷ See Section VI. A.

of competitive bidding, which may carry over to the House and result in passage of an auction bill during this Congress.

Whenever they are authorized in the next few years, spectrum auctions will place an entirely new and significant factor in the financial equation for PCS licensees. PCS entities that now project enough revenue to finance immediate involuntary relocation of microwave incumbents may be unable to do so if they also have to pay for the privilege to use the spectrum.

C. A 10-Year Transition Period Will Serve the Public Interest by Promoting Spectrum Efficiency and Marketplace Principles.

Several PCS proponents stated that any transition period would serve no purpose in light of the protections to be afforded microwave incumbents in the event of involuntary relocation.³⁸ If microwave incumbents are guaranteed "comparable alternative facilities" and full compensation for relocation, they will suffer no more harm if relocated tomorrow than if relocated in 10 years, according to PCS entities.³⁹ This reasoning ignores the fact that a 10-year transition period has a significant public interest purpose of promoting spectrum efficiency and marketplace principles.

As LCRA discussed in its comments, it is not in the public interest to prematurely displace 2 GHz microwave licensees before

³⁸ Comments of Time Warner at 5; Comments of Telocator at 7; Comments of APC at 3; and Comments of Cox at 5-6.

³⁹ Comments of Time Warner at 5.

sufficient time is available to determine the feasibility of spectrum sharing. This sentiment was expressed by many other commenters as well, including Southwestern Bell:

[T]he Commission may be moving too quickly, and replacing valuable and effective uses of spectrum with speculative and unproven uses. [Southwestern Bell] also believes that the Commission would be better off giving techniques, such as spectrum sharing, more time to be tested and implemented in order to avoid displacing and relocating a large number of existing 2 GHz fixed microwave licensees unnecessarily. A long transition period (e.g., ten years) would give the Commission and the industry more time and better information before making potentially irreversible, costly, and unwise spectrum and facility relocation decisions.⁴⁰

Comments filed in the PCS proceeding also indicate that the feasibility of spectrum sharing could dramatically change PCS spectrum needs over a number of years. One PCS proponent, as part of its argument supporting a 40 MHz allocation for PCS licensees, proposes letting the Commission reclaim up to 10 MHz from a licensee if PCS demand and sharing techniques do not justify the 40 MHz allocation.⁴¹ It would be better to wait and see if needs can be met with a sufficiently large spectrum block before rushing to involuntarily relocate incumbents.

In addition, a longer period before involuntary relocation can occur furthers the public interest by encouraging parties to

⁴⁰ Comments of Southwestern Bell at 5 (footnote deleted).

⁴¹ Comments of APC, GEN Docket 90-314, filed January 8, 1993, at 10. LCRA supports a 40 MHz allocation for PCS licenses to the extent it will facilitate greater spectrum sharing and minimize the need to relocate fixed microwave incumbents. See "Putting It All Together: The Cost Structure of Personal Communications Services," Office of Plans and Policy Working Paper No. 28 (November 1992) at 53-55.

reach spectrum agreements voluntarily. Regardless of the protections afforded microwave incumbents by the involuntary relocation procedures, involuntary relocation will exact a high cost on all parties involved. Licensees and the Commission will waste scarce resources on the inevitable disputes over compensation and comparability that could be resolved if the marketplace were free to work unfettered for a longer period. Microwave operations will be disrupted. PCS licensees and their consumers will be burdened with the added cost of financing microwave relocation, a burden that might be avoided if sharing techniques evolve to eliminate the need for relocation. In the end, agreements reached by the parties alone likely will result in more efficient and beneficial spectrum usage.

**D. A 10-Year Transition Period Will Not Result
in "Windfalls" for 2 GHz Microwave
Incumbents.**

As expected, PCS proponents generally advocated a short transition period of one to three years or no transition period at all.⁴² They apparently continue to seek a mass relocation of microwave incumbents from the 2 GHz band as soon as possible! They offer little justification for a short period except that it will prevent incumbents from holding out for a windfall during a long period of voluntary negotiations, a scenario not likely to

⁴² The calls for a transition period shorter than three years ignore the Commission's September 1992 decision establishing three years as the shortest transition period the Commission would consider in this proceeding. Order and Notice at para. 27.

occur. Moreover, advocates of a short or no transition period fail to explain how the goals of the transition period can be accomplished in such a short time.

The claim that a long transition period will permit microwave incumbents to realize a windfall is unfounded. The windfall scenario with which PCS advocates are obsessed is as follows: Microwave incumbents will refuse to relocate voluntarily unless paid a premium beyond actual relocation expenses, and PCS entrants, allegedly desperate for the occupied spectrum, will have no choice but to pay the demanded sum because they cannot wait until involuntary relocation procedures will be available.

This scenario is contrary to marketplace realities. It assumes that 2 GHz microwave licensees have no incentive other than money to enter voluntary relocation agreements, which simply is not true. First, microwave licensees have stated all along that they are not seeking a windfall and do not oppose relocation as long as a comparable alternative and full compensation is provided. PCS advocates have no reason to question the truth of this statement, just as microwave incumbents have no reason to question the truth of PCS entities' oft-stated commitment to pay for relocating 2 GHz incumbents to reliable alternatives.

Second, the possibility of eventual relocation gives 2 GHz microwave incumbents an incentive to relocate sooner rather than later. Given the limited capacity in the proposed relocation

bands above 3 GHz,⁴³ the earliest relocations are likely to be the least troublesome because the possibility of securing reliable relocation frequencies will be the greatest. As Omnipoint Communications stated:

Ironically, it may be the last ones to be moved rather than the first ones to be moved that will complain the loudest.⁴⁴

The areas where PCS entrants most likely will seek early relocation -- major metropolitan markets -- are the same areas where microwave incumbents will have the greatest incentive to enter a voluntary relocation agreement early. In these areas where the least relocation spectrum will be available, 2 GHz microwave incumbents will be reluctant to pass up an offer of relocation to an adequate alternative.

Third, remaining in the band when others leave could result in problems procuring adequate equipment as manufacturers find it no longer profitable to maintain production lines or spare parts for a limited market.⁴⁵

⁴³ Comments filed in response to the Commission's proposal to rechannelize bands above 3 GHz revealed widespread agreement that those bands have limited capacity to accommodate displaced 2 GHz licensees because of interference problems and already existing congestion. See Reply Comments of LCRA, ET Docket 92-9, filed January 27, 1993.

⁴⁴ Comments of Omnipoint Communications at 2.

⁴⁵ Comments of UTC at 10.

**VII. THE COMMISSION SHOULD ISSUE A FURTHER NOTICE ON A
TRANSITION PLAN FOR SPECTRUM PROPOSED FOR UNLICENSED
PCS.**

LCRA stated in its comments that, despite general agreement on the need to relocate all microwave licensees from spectrum allocated for unlicensed PCS ("U-PCS"), no one, including the Commission, has proposed a specific transition plan for the U-PCS band. Several parties mentioned establishing a consortium to facilitate relocation of microwave incumbents but, again, concrete details of such a plan have not materialized. In response to the Commission's question whether no transition period is appropriate for U-PCS,⁴⁶ some commenters said the same period should apply to U-PCS as to licensed PCS. Other commenters stated that the licensed PCS transition plan, which promotes spectrum sharing, would not work for U-PCS because unlicensed devices require clear spectrum.⁴⁷ The Commission should issue a further notice clarifying that an entirely different plan is needed for U-PCS and proposing specific details of such a plan.

VIII. CONCLUSION

LCRA supports establishing a 10-year transition period that commences upon the grant of a PCS license in each market. Such a transition period would further the Commission's goal of meeting PCS spectrum demand through spectrum sharing and voluntary

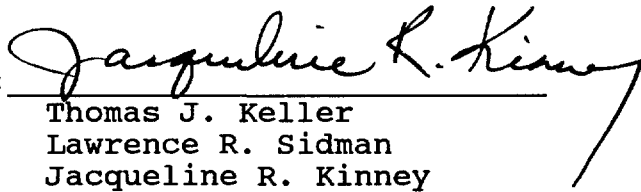
⁴⁶ Order and Notice at para. 27.

⁴⁷ Comments of Apple Computer at 8-10; Comments of Pacific Telesis at 1-3; Comments of North American Telephone Association at 4-9; and Comments of Omnipoint at 5.

negotiations without resorting prematurely to costly and burdensome involuntary relocation. In addition, LCRA urges the Commission to issue a further notice with a specific proposal for a transition plan for the spectrum reallocated for U-PCS.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Jaime Y.W. Bierds, a secretary for the law firm Verner, Liipfert, Bernhard, McPherson and Hand, Chartered, do hereby certify that a true and correct copy of the foregoing "Reply Comments of Lower Colorado River Authority" was delivered by hand, this 12th day of February, 1993, to the following:

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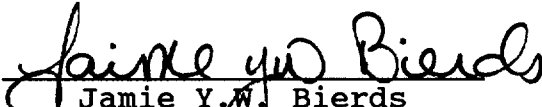
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